PURPOSE OF AND NEED FOR THE PLAN

Figure 1. Region

INTRODUCTION

The purpose of the federal action is to prepare a general management plan (GMP) for the expanded Death Valley National Park. The goal of the general management plan is to determine how best to manage the unit to meet the Congressional intent as expressed in the California Desert Protection Act and the mission of the National Park Service. The park was created in 1994 by the California Desert Protection Act, at which time the existing Death Valley National Monument was expanded by 1.3 million acres, designated a national park, and designated 95% wilderness. An existing general management plan for the monument, approved in 1989, served as the basis for the development of this proposed general management plan.

General management plans provide the overall management strategy for approximately 10–15 years. More detailed activity or implementation plans are prepared after this plan is approved. General management plans are broad in scope rather than specific, and focus on purposes of the unit, its significant attributes, its mission in relation to the overall mission of the agency, what activities are appropriate within these constraints, and resource protection strategies. They also provide guidelines for visitor use and the development of facilities for visitor enjoyment and administration.

Also, a "Land Protection Plan" (LPP) is included as a component of this planning effort (appendix B). The "Land Protection Plan" addresses the management or acquisition strategy for nonfederal lands and interests that occur within the boundary of the park. Approximately 52,000 acres of the park are in nonfederal ownership (private lands, state lands, patented mining claims).

The National Parks and Recreation Act of 1978 (P. L. 95-625) requires the National Park Service to prepare general management plans for each park unit. The act specifies that the general management plan should address measures for the preservation of the area's resources, the types and general intensities of development, visitor carrying capacities and potential boundary modifications. This proposed general management plan addresses these issues, except for boundary modifications. During the prolonged debate over the expansion of Death Valley National Park the boundaries were subjected to considerable scrutiny and public debate. The National Park Service believes a comprehensive examination of potential boundary modifications at this time is unwarranted.

BRIEF DESCRIPTION OF DEATH VALLEY NATIONAL PARK

Death Valley National Monument was established by presidential proclamation under the Antiquities Act of 1906, on February 11, 1933 (Proclamation No. 2028). The original monument contained approximately 1,601,800 acres. Supplementary proclamations in March 1937 (No. 2228) and January 1952 (No. 2961) increased the monument's acreage to 2,067,793 acres. The Monument was subsequently enlarged and changed to Death Valley National Park by

Congressional action on October 31, 1994, with the passage of the California Desert Protection Act (16 U.S.C. 410aaa-83). Approximately 1.3 million acres of new lands were added, bringing the total acreage of the new park to about 3,396,192 acres. Nearly 95% of the park was designated as wilderness by that same act. Death Valley National Park is the largest national park unit outside of Alaska. The vast majority of its lands are located in the California counties of Inyo and San Bernardino, but a small portion of the park is located in the Nevada counties of Nye and Esmeralda. California State Highway 190 crosses the park east to west, and Highway 95 parallels the park north to south on the park's eastern boundary.

Death Valley National Park is the lowest point in the Western Hemisphere and one of the hottest places in the world. It is also a vast geological museum, containing examples of most of the earth's geologic eras. Here, plant and animal species, some of which occur nowhere else in the world, have adapted to the harsh desert environment. Humans have adjusted to these severe conditions, as evidenced by extensive archeological sites; historical sites related to successive waves of prospectors; miners, and homesteaders; present-day residences of native Americans; and the current resort developments and active mines.

Perhaps the park's greatest assets today are the clear air, vast open spaces that stretch toward distant horizons, and the overwhelming silence. Approximately 1.2 million people a year (1997 numbers) come to Death Valley to experience the stark and lonely vastness of the valley; the panorama of rugged canyons and mountains; the pleasures of the dry, moderate winter climate; the challenge of the hot, arid summer; the relief of the cooler mountains; and the reminders of frontier and Native American ways of life.

Death Valley National Park includes most of Death Valley, a 156-mile-long north/south-trending trough that formed between two major block-faulted mountain ranges: the Amargosa Range on the east and the Panamint Range on the west. Telescope Peak, the highest peak in the park and in the Panamint Mountains, rises 11,049 feet above sea level and lies only 15 miles from the lowest point in the United States in the Badwater Basin salt pan, 282 feet below sea level. The California Desert Protection Act added the Saline, Eureka, northern Panamint Valley and Greenwater valleys to the park.

The diversity of Death Valley's plant communities result partly from the region's location in the Mojave Desert, a zone of tension and overlap between the Great Basin Desert to the north and the Sonoran Desert to the south (Kearney and Peebles 1960). This location, combined with the great relief found within the park, from 282 feet below sea level to 11,049 feet above sea level, supports vegetation typical of three biotic life zones: the lower Sonoran, the Canadian, and the Arctic/Alpine in portions of the Panamint Range (Jepson 1923; Storer and Usinger 1968). Based on Munz and Keck (1968) classifications, seven plant communities can be categorized within these life zones, each characterized by dominant vegetation and representative of three vegetation types: scrub, desert woodland, and coniferous forest. Microhabitats further subdivide some communities into zones, especially on the valley floor.

Death Valley National Park and the adjacent desert support a variety of wildlife species, including 51 species of native mammals, two species of exotic mammals, 307 species of birds, 36 species of reptiles, three species of amphibians, and five species and one subspecies

of native fishes (Hansen 1972 and 1973; Landye 1973). Small mammals are more numerous than large mammals, such as desert bighorn, coyote, bobcat, mountain lion, and mule deer. Mule deer are present in the pinyon/juniper associations of the Grapevine, Cottonwood, and Panamint mountains.

Many historic properties exist within the park. Most of those meeting the national register criteria for significance and integrity have been listed on the National Register of Historic Places. Most of the sites contain structures or other tangible remains of the activities that took place there. Death Valley National Park is unique because it displays a continuum of mining activities from at least the 1860s to the present day. Many historic mining resources are of particular significance either because similar resources are not found elsewhere within the national park system or because they are in a better state of preservation than examples found elsewhere.

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FIGURE 1. REGION

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FIGURE 1A. PLACE NAMES

(Back of Place Names map)

MISSION

Death Valley National Park Mission: Death Valley National Park dedicates itself to protecting significant desert features that provide world class scenic, scientific, and educational opportunities for visitors and academics to explore and study.

NPS Mission: The National Park Service is dedicated to conserving unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Service is also responsible for managing a great variety of national and international programs designed to help extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world (NPS 1996).

PURPOSE AND SIGNIFICANCE

An essential part of the planning process is understanding the purpose and significance of the land for which the plan is being prepared. In the case of federal lands, Congress provides the purpose(s) of the unit and the mission of the agency charged with managing the area. Significance is usually determined by familiarity with the natural and cultural resources of the region, although some significant elements are often recognized in the enabling legislation.

DEATH VALLEY NATIONAL PARK PURPOSE

- Preserve the unrivaled scenic, geologic, and natural resources of these unique natural landscapes, while perpetuating significant and diverse ecosystems of the California Desert in their natural state. Ensure the maximum protection of wilderness values provided by law.

- Preserve the cultural resources of the California Desert associated with prehistoric and historic and contemporary Native American culture, patterns of western exploration, settlement and mining endeavors.

- Provide opportunities for compatible public outdoor recreation and promote the public's understanding and appreciation of the California desert by interpreting the natural and cultural resources.

- Retain and enhance opportunities for scientific research in undisturbed ecosystems.

DEATH VALLEY NATIONAL PARK SIGNIFICANCE

Death Valley National Park contains the lowest point in North America at 282 feet below sea level. The valley floor receives the least precipitation in the U.S. (average 1.84 inches per year) and is the site of the nation's highest and the world's second highest recorded temperature (134 degrees Fahrenheit).

- Death Valley National Park is world renowned for its exposed, complex and diverse geology and tectonics, and for its unusual geologic features, providing a natural geologic museum that represents a substantial portion of the earth's history.

- Death Valley has been the continuous home of Native Americans, from prehistoric cultures to the present day Timbisha Shoshone Tribe.

- The extremely colorful, complex, and highly visible geology and steep, rugged mountains and canyons provide some of the most dramatic visual landscapes in the United States.

- Death Valley National Park contains one of the nation's most diverse and significant fossil records and most continuous volcanic histories.

- Death Valley National Park contains five major sand dune systems representing all types of dune structures, making it one of the only places on earth where this variety of dune types occurs in such close proximity. It also contains the highest dunes in California–Eureka Sand Dunes.

- Death Valley National Park is one of the largest expanses of protected warm desert in the world. Ninety-five percent of the park is designated wilderness, providing unique opportunities for quiet, solitude, and primitive adventure in an extreme desert ecosystem.

- Contrary to many visitors' first impression, Death Valley National Park's natural resources are extremely diverse, containing a large variety of plant species and community types. The area preserves large expanses of creosote bush valleys and other vegetation typical of the Mojave Desert. Extreme conditions and isolation provide habitat for an unusually high number of plant and animal species that are highly adapted to these conditions.

- Death Valley National Park has an extensive and well-preserved mining history representing over 100 years of mining technology.

- Death Valley National Park contains an unusually high number of well-preserved archeological sites, including rock art and alignments.

- Scotty's Castle, with its architectural style, quality, and priceless collection of antiques and art objects, built in a remote, isolated desert location in the early 1900s, is an icon that has immense public appeal.

PRIMARY INTERPRETIVE THEMES

The National Park Service identifies major themes that are used to guide the development of interpretive materials (signs, brochures, walks, talks, etc.). Major themes are those elements that visitors should develop an understanding of during their visit. These themes would be used by Death Valley staff to develop an interpretive plan for the park

- Death Valley National Park is a land of contrast and extremes–elevations range from below sea level where the climate is the hottest and driest in North America, to the surrounding high mountain ranges, which are cool and snow covered throughout the winter.

- Death Valley National Park's diverse landforms were created by dynamic geologic forces that continue to shape this desert environment.

- Death Valley National Park contains archeological and historic sites that represent at least 10,000 years of human occupation and preserve contrasting evidence of how each approached living in this harsh climate. Native American prehistory, history, and contemporary lifeways offer important information to all Americans.

- The rocks found within Death Valley National Park represent all of the great eras of geologic time and include important fossil resources that provide a glimpse into ancient habitats and the prehistoric plants and animals that once lived here.

- To survive the extreme climate and scarcity of water, the diverse species of this desert region have evolved many specialized adaptations.

- Although water is sparse in Death Valley National Park, its availability determines the location and type of life forms found here, and the preservation of water is vital to the survival of this diversity of life.

- Deserts are often viewed as vast, seemingly barren wastelands, but are in fact, fragile, arid ecosystems with many life forms.

- The fragile desert environment of Death Valley National Park is easily impacted by human activities—mere footprints can impact the land in lasting ways.

- The vastness and remoteness of the park provides a sense of solitude and opportunities for exploring a land of diverse mountain ranges, sand dunes, canyons, and desert basins.

MANAGEMENT OBJECTIVES

NATURAL AND CULTURAL RESOURCES

Maintain, preserve, interpret, and perpetuate the aesthetic setting, and the natural and cultural resources, of Death Valley National Park in such as manner as to:

- Protect the significant natural and cultural resources and values of the park, including geologic features, and to foster an improved understanding of natural processes through monitoring efforts and scientific research.

- Perpetuate native plants and animal life for their essential roles in the natural ecosystem.

- Ensure the perpetuation of rare and endangered plants and animals and those species endemic (specific) to Death Valley National Park.

- Perpetuate and increase water resource science and conservation.

- Perpetuate the Devils Hole pupfish in the detached Devils Hole section of the park.

- Eliminate existing and prohibit new occurrences of all activities inconsistent with the protection of the natural ecosystem, except in the park's developed areas, as noted in the park's management plans.

- Restore to natural appearance, inasmuch as feasible, the land surfaces disturbed by man, recognizing that significant cultural values must be preserved.

- Prohibit or minimize the adverse effects of mining and mineral development that conflict with resource preservation and public appreciation of natural and cultural values.

- Provide for the reclamation of mining areas and the eventual completion or phaseout of mining.

- Maintain air quality monitoring to facilitate implementation of means to prevent deterioration of air quality and visibility.

- Continue to pursue redesignation of Death Valley National Park from a class II floor area to a class I air quality area.

- Prevent, eliminate, or reduce artificial lighting and noise in order to preserve the opportunity for visitors to experience the night sky and stillness of the desert.

- Perpetuate unimpaired the park's cultural and archeological resources, protecting them from vandalism, unauthorized excavation, collection, or appropriation.

- Protect the park's collections of natural and cultural objects from deterioration, natural disaster, misuse, and loss.

- Operate and manage Scotty's Castle, its grounds, and environs to recreate the atmosphere of the period of its construction and occupation by Walter Scott and Mr. and Mrs. Albert Johnson.

- Support research programs pertaining to natural and cultural resources and to social sciences, consistent with the park's resource protection and visitor services mission.

VISITOR USE

- Provide the visitor to Death Valley National Park with the opportunity to discover, explore, and understand the natural and cultural resources of the park.

INTERPRETIVE SERVICES

- Offer a variety of quality informational services that differ in format, media, and intensity of presentation, and that are sensitive to the special needs, interests, and cultural backgrounds of a diverse mix of visitors.

- Offer visitors an understanding of park values and resources, and include as an integral part of interpretive materials major park management and resource protection challenges.

- Enhance the visitor understanding of Native American cultures.

- Maximize opportunities for visitor enjoyment and appreciation of interpretive services, facilities, and resources, consistent with other park management objectives.

- Provide information on the surrounding area, including appropriate safety awareness for visitor use of rugged, isolated Death Valley and its environs.

- Maintain a useful library and a study collection operation that is up-to-date and reflects current preservation policies.

- Maximize services (talks, facilities) for educational and other groups that enrich the park's database and enhance their understanding and appreciation of Death Valley.

RECREATIONAL ACTIVITIES

- Permit access to all areas of the park, consistent with resource protection objectives and within optimum carrying capacities/use limits.

- Offer a variety of recreational opportunities that are sensitive to the range of visitor interests, physical capabilities, and time and financial limitations.

- Provide an opportunity for exploring the backcountry, experiencing the wildness of the high Panamint, Grapevine, Cottonwood, and Funeral ranges, as well as camping and sight-seeing in a setting of climatic relief from the valley floor; provide a wilderness experience for those who desire it, in balance with the limitation of the fragile resource.

- Provide access to points of interest within the park by a variety of means, including automobiles, tour buses, four-wheel-drive vehicles, horses, hiking and facilities for private aircraft.

CONCESSIONERS

- Maintain, preserve, and perpetuate an aesthetic setting for commercial services and community support services, with Furnace Creek being retained as the focal point, and provide secondary year-round commercial facilities and services at Scotty's Castle, Stovepipe Wells, and Panamint Springs.

- Perpetuate the use of historic structures and facilities for commercial purposes, in a manner consistent with their historical significance.

FACILITIES AND SERVICES

- Compatible with resource protection goals and carrying capacity limits, provide facilities and services to accommodate visitor needs.

- Maximize use of existing facilities and accommodate necessary expansion of visitor facilities and services; build new facilities or expand existing facilities only when a clearly demonstrated, continuing need exists, ensuring that environmental impacts are minimized.

- Provide for a variety of overnight visitor accommodations (including lodging and camping) and food services, while ensuring the preservation of natural and cultural resources.

- Encourage appropriate development of overnight facilities and related services by private inholdings and private enterprise outside the park.

- Ensure that authorized commercial uses in Death Valley National Park are compatible with the preservation and safe enjoyment of the park's resources.

- Improve water handling facilities to assure appropriate conservation.

- Ensure that the types and prices of commercial services provided will accommodate a range of park visitors and needs.

- Through landscaping and design, screen concessioner and National Park Service operations and maintenance areas from visitor areas.

- Develop utilities and telephone service only as needed; investigate alternative energy systems, especially solar and water, to minimize energy consumption and environmental impacts.

- Provide seasonal levels of commercial services that are responsive to visitor use patterns.

OPERATIONS

- Maintain the public use and administrative support facilities and equipment in a manner that will provide visitors safe and enjoyable experiences and prolong the life of the equipment and facilities.

- Provide for visitor and employee safety through an ongoing safety program that recognizes the hazards of heat and flash floods, as well as the physical hazards of mine areas.

- Provide employees with a safe and healthy work environment and with training to work safely.

- Upgrade and replace directional/informational signs so as to better aid visitors, recognizing that signs should fit into a parklike environment.

- Manage the maintenance program in a cost-effective manner; supervise proper use of manpower, equipment, supplies, and money.

- Promote strategies for management efficiency through revenue enhancement (fee collection), private sector support, volunteerism, improved concessioner maintenance, and productivity enrichment (contracted services).

- Provide timely service to park employees in personnel management, procurement, finance, word-processing, mail, and dispatch/telephone operations, thereby improving morale and allowing park staff to better utilize their time in meeting visitor and resource needs.

- Provide for adequate housing, employee services, and recreational opportunities for employees.

REGIONAL PLANNING AND COOPERATION

Cooperate with other federal, state, and local agencies and private interests in the development of plans, facilities, and programs in order to provide more effective service to the public.

- Work with California (Inyo and San Bernardino counties) and Nevada (Nye and Esmeralda counties) to obtain concurrent jurisdiction status for the park.

- Communicate to visitors and scientists the concept of the Man and the Biosphere program, and cooperate with Joshua Tree National Park, Anza-Borrego Desert State Park, and the University of California's Boyd Deep Canyon, which together with Death Valley comprise the Mojave and Colorado Deserts Biosphere Reserve.

- Encourage the use of Death Valley's resources as a center of scientific research interest, consistent with the perpetuation of native natural processes and the preservation of extant cultural resources.

- Work with the state of Nevada and various research institutions in the understanding and management of the Death Valley aquifer.

- Cooperate with the state of California to provide for road maintenance and patrol, with Inyo County for health, educational, library, and law enforcement services, and with the U.S. Postal Service; ensure that all these services benefit employees, their families, and visitors.

- Encourage the perpetuation of Death Valley's Native American cultural heritage.

CARRYING CAPACITY

A widely accepted definition of carrying capacity is "the character of use that can be supported over a specific time by an area developed at a certain level without causing excessive damage to either the physical environment or the experience of the visitor." That level of development can range from none to extensive amounts of infrastructure to support visitors' uses.

There are three principle components that relate to determining the carrying capacity for a national park:

- The ecological or physical capabilities of the natural and cultural resources to sustain certain levels of visitor use without reaching unacceptable levels of damage. Each landscape may have varying abilities to absorb different kinds of and levels of visitor use before unacceptable levels of impact occur.

- The sociological carrying capacity is the ability of visitors to enjoy and appreciate these resources without interference by other visitors. Determining social carrying capacity can be one of the most difficult parts of the three components. Identifying numbers relating to visitation in an area is not a valid determinant of a quality visitor experience. Other factors such as visitor behavior, preconceived expectations, and social norms of the dominant user group can also effect visitor enjoyment.

- The type and amount of NPS management that has been, or can be applied to the activity to mitigate unwanted impacts is also a factor. The third component relates to the management of park roads, parking lots, buildings, trails, and visitor information. For example, providing interpretive services is an effective way to instill in the visitor an understanding and appreciation for park resources. Such understanding helps implement carrying capacity for a particular area. Limiting parking in certain areas can effectively limit visitation.

The current carrying capacity for Death Valley National Park must be generally assumed to be at a low to moderate level for most areas of the park. The implementation of recommendations as called for in this plan will increase the level of protection for fragile or sensitive resources. Until future implementation plans are developed, the National Park Service should manage visitor activities in a way that leans toward resource protection.

General management plans provide NPS managers with management direction on a broad, prescriptive level. Management objectives for carrying capacity are thus written as narrative statements. These statements define the desired future visitor experience and resource conditions in qualitative terms such as “sense of seclusion,” or “low degree of tolerance for resource degradation.” The qualitative descriptors that have been identified as “desired visitor experience and resource conditions,” would be refined and translated into quantitative standards during future implementation planning. As previously mentioned, indicators and standards of quality for both the physical and social environments would be developed within future implementation plans. These products would be quantifiable and measurable aspects of the carrying capacity process.

DESIRED FUTURE CONDITIONS

Desired future conditions for natural and cultural resources and the visitor experiences are described below. The descriptions are qualitative in nature and can be translated into quantitative standards over time during the implementation of this plan. Some descriptions could be applied to broad areas such as wilderness, while others apply to smaller areas such as road corridors and points of development. These descriptions serve as guides for managing the land and facilities to achieve desired carrying capacities.

Natural Areas

An informal, self-guiding learning experience is provided for visitors in these areas. People are encouraged to get out of their vehicles and walk to features. The pace is slower with low to moderate levels of noise. Visitors typically focus on specific resources with few visual intrusions. Visitors experience a sense of learning through onsite interpretation or other means.

The length of stay at each site is relatively short in comparison to the time the visitor spends in the park. There is a moderate amount of social crowding and moderate social interaction at points of interest and along dead-end trails. Guided ranger walks are occasionally provided for visitors at some locations. Development is limited to items such as low interpretive panels, small directional signs, and hardened dirt paths. Fences and boardwalks are used as a last resort to protect resources if other management efforts do not work. The tolerance for resource degradation is low to moderate, depending upon the sensitivity of the resource to impacts by use. The degree of onsite visitor and resource management is moderate and increases or decreases with visitation levels.

Wilderness

Visitors in this landscape experience a primeval environment largely untouched by people. Some sections of wilderness within the park may have remnants of human occupation, but these features are considered a part of the history and scenery to be explored. A high degree of physical exertion may be required to hike or ride horseback to this area. A minimal amount of hiking trails may be present, often requiring a person to travel cross-country to get to a desired destination. Abandoned roads may be used as routes of travel. Opportunities for independence, closeness to nature, tranquility, and the application of outdoor skills are high. Opportunities for social interaction with other visitors are low, as is the probability of encountering NPS employees. Likewise, evidence of other visitor impacts is minimal.

The landscape offers a high degree of challenge and adventure for visitors. The visual quality of the landscape contributes significantly to the visitor experience and needs to be protected. The tolerance for resource degradation is low, with the exception of designated trail corridors, where a slightly higher level of degradation is allowed within a few feet of the trail and at points where camping occurs. A minimal amount of resource and visitor management is present. Offsite visitor management (provision of information) is low to moderate.

Historic Preservation Areas

Historic preservation areas offer visitors a chance to gain a sense of the past without compromising the integrity of the resource. Often there are opportunities to learn by vicariously experiencing the emotions and thoughts of those who lived in the past. The experience is often a visual one, with feelings gained by physical spaces, smells, and sounds add to the whole experience. Interpretive information adds color and meaning to the experience.

The degree of tolerance for resource degradation is low for historic resources. The chance of seeing other visitors and having social interaction is potentially high, depending on the degree of public access and visitor interest. The opportunity for contact with NPS personnel is high where ranger-led tours are offered. Visitor behavior is managed to protect the character of each place. NPS onsite management is high at sites with high visitation and impact sensitivity. Paved walks, fences, and interpretive panels are used as needed to accommodate public access and interest. If interest is high, improvements may be needed to allow visitors to experience these resources while protecting them from visitor use impacts. Improvements must not distract from the significance of each location. Some features are convenient and easily accessible with little need for visitors to exert themselves, apply outdoor skills, or make a long time commitment to see the area. Some features are located at remote locations and require more effort and skill to experience. Adventure is often a part of the visitor experience at these places. The way in which people currently gain access to these locations remains unchanged since this experience contributes to resource protection and its appreciation. Changes in access should only be made if there is strong justification to do so. Remote locations should provide a primitive setting with opportunities for solitude, exploration, and learning, with minimal amounts of human intervention such as signs or interpretive panels.

Visitor Facilities

The visitor experience in these areas is heavily influenced by structures and other fabricated features, and they are part of the visitor experience. The pace is varied with opportunities to walk and drive. The site often is noisy with vehicles and people nearby. Visitors have opportunities to learn about park resources and receive many services from facilities. Visual distractions from other visitors and their vehicles are common and expected. Buildings and other facilities are predominant, but where exceptional natural elements or cultural elements are present, they should be made part of the visitor experience. These constructed features are coordinated by design to reduce visual contrast with the natural or cultural setting. Although these are developed areas, they should still offer a contrast from urban life and a chance to relax and enjoy the outdoors.

Most facilities are convenient and easily accessible by the public. Many areas provide a strong opportunity for social interaction. Encounters with NPS staff are frequent. The tolerance for social crowding is high but there are opportunities to learn and experience a change in pace from city life. Most facilities are accessible to visitors with disabilities. Resource impacts at visitor facilities are as low as possible and occur only when there is no practicable alternative. Visitors and facilities are intensively managed for resource protection,

visitor management, and safety (that is, there are fences, law enforcement is intensive, and visitor activities are monitored or restricted).

Paved and Graded Roads

Paved and graded roads are the dominant experience for most park visitors. Visitors use these narrow corridors and roadside pullouts for touring, enjoying scenic overlooks, and gaining access to natural and cultural features. While traveling, visitors may read about and understand the features they are seeing. Bicycle travel is allowed, but motorized vehicles are more common. Viewing the scenery is very important, but the views are often of distant landscapes. Vistas are protected. First-time visitors may have a sense of exploration, but very little physical exertion is needed, outdoor skills are not necessary. Visitors may spend a long time in this zone. The probability of encountering other visitors is very high, although chances for social interaction are low except at roadside pullouts. The opportunity for direct contact with NPS staff is low unless emergency situations arise.

A moderate to high level of NPS management (highway signs, visitor protection) is needed to provide visitors with a safe and enjoyable experience. Because maintenance work and driving off roads cause dirt roads to grow wider, it is necessary to specify maximum road widths and approved pullouts. Roads are limited to specified widths unless where strong justification exists. Resources can be modified for essential visitors and administrative operational needs. The tolerance for resource degradation in these corridors is moderate. Allowable impacts are restricted to a short distance from roads and pullouts.

Unmaintained Dirt and Four-Wheel Drive Roads

Unmaintained dirt roads provide a unique experience for drivers and other users such as mountain bike riders, equestrians, and hikers. The predominant use is by visitors in vehicles driving to enjoy the scenery, or to go to historic mining sites, or to a specific feature. Some visitors experience a strong sense of exploration, challenge, and adventure. Travel speeds are slow to moderate, with the potential of frequent stops. Many of these roads give visitors a sense of escape from urban life. The areas through which these roads pass are predominantly natural, but there is some evidence of people having used the area in the past and present. Increased impacts from human use are prevented to protect the existing qualities of the landscape. Support features such as small directional signs or interpretive panels are present but infrequently seen and inconspicuous in character.

Visitors may need to extend themselves, use outdoor skills, and make a long time commitment. Some roads within the park have rough conditions that often require specific driving skills and more time to complete the route. Opportunities for challenge and adventure are available on some 2-wheel drive roads that require high clearance vehicles. Opportunities for social interaction are low, unless people are traveling in a group. A moderate level of management is provided on heavily used roads to protect resources and visitors. Most people who use these roads do not wish to see many other vehicles.

Resource modification is evident, but where possible, should harmonize with the natural environment. The park's tolerance for resource degradation in this zone is low except that limited signs, road surfaces and shoulders, pullouts, and camping areas, are permitted. It is recognized that some 4-wheel drive roads have a number of short sections that have been widened natural occurrences such as washouts.

PLANNING ISSUES AND MANAGEMENT CONCERNS

PLANNING PROCESS INCLUDING ISSUE SELECTION AND DEVELOPMENT OF ALTERNATIVES

In the early stages of this planning process, the planning team developed a list of issues from its own research and from input received from the Bureau of Land Management, National Park Service, and U.S. Fish and Wildlife Service, as well as from state, local, and other federal agencies and from the public through a series of public meetings held in September of 1995. An agency meeting was held in Barstow, California, and the public meetings were held in Baker, Barstow, Furnace Creek, Independence, Lone Pine, Needles, Pasadena, San Bernardino, and Ridgecrest, California, and in Las Vegas, Nevada. A summary of the scoping process and issues developed from the public and from intra-agency and interagency scoping meetings is in the Consultation and Coordination section.

The alternatives presented within this document address the options for dealing with the issues and information gathered during the scoping process. The planning team compiled and reviewed information discussed at the scoping meetings and determined which issues were compatible with various laws, the NPS mission, and the mission and purpose and significance of Death Valley National Park and were appropriate to be analyzed within this document. The process used to evaluate the scoping information primarily involved sorting the issues into the following five categories:

1. Items that were statements or background information and not issues requiring analysis (for example, "the National Park Service might need money or volunteers to maintain trails" and "parts of the desert are rich in minerals").
2. Issues that were operational and not suitable for discussion in a long term planning document (for example, "the staff should be kept up-to-date on training).
3. Issues not within the NPS's jurisdiction (for example, military aircraft should be banned from NPS units).
4. Issues considered but not suitable for analysis (see below sub-sections Planning Constraints and Mandates and Actions Considered as Alternatives but Rejected).
5. Issues appropriate for this planning effort's analysis and discussion. These last issues are listed below and described in detail in the Alternatives section.

PLANNING PROCESS

Once the planning team identified those issues that could be addressed, the team took the following steps:

- became familiar with the planning area and its resources through the literature and tours of the planning area

- began the development of a GIS database to be used in mapping and analyzing various factors
- resolved and developed the formats for the documents
- developed the NPS units' significance and purposes statements
- held open houses for BLM, Death Valley, and Mojave staff to update them on the planning progress
- met with local government representatives
- met with Timbisha Shoshone, Ft. Mohave, Chemehuevi, and San Manuel tribal members
- met numerous times with the Death Valley National Park's Advisory Commission, Mojave National Preserve's Advisory Commission, and the BLM Advisory Council
- met with staff of the University of California's Granite Mountains Natural Reserve
- developed the scope and direction for a contracted socioeconomic analysis

With the list of the issues identified, the planning staff developed conceptual alternatives. These concepts were sent to the public in a March 1997 newsletter. In April 1997 the planning staff held public workshops at the same locations as described in the above paragraph (with Bishop, California substituted for Independence). Participants at these workshops discussed the proposed alternatives with the planning team. Following public input, an agency meeting was held in Barstow in May 1997 to gather staff input. This input was used in preparation of this DEIS / GMP for Death Valley National Park and the DEIS / GMP for Mojave National Preserve. The Bureau of Land Management used the previously mentioned input in preparing its draft CDCA plan amendment/DEIS.

After public review of this document, a final environmental impact statement (FEIS) will be prepared. A record of decisions will be prepared thirty days after release of the final environmental impact statement announcing the alternative chosen as the agency action. The National Park Service will also prepare stand-alone general management plans and land protection plans that are summary documents of the management direction, uncluttered by alternatives, impacts, and other information required as part of the National Environmental Policy Act process.

ISSUES IDENTIFIED DURING PUBLIC SCOPING

The following list of issues was derived from a series of public meetings throughout the planning area in September 1995 and from written comments received. The list is planning area-wide and not specific to Death Valley.

Visitor Use and Administration

- The public needs maps showing access, wilderness, desert tortoise critical habitat, land status, and hunting areas.
- Careful consideration should be given to visitor service locations, including analysis of the use of private facilities outside NPS boundaries to provide certain visitor services. An evaluation of volunteer use should be included in the plan.

- Anticipate an increase in the Southern California and Las Vegas populations and prepare for increased use of the area while still providing a quality experience for visitors.
- Address policy on pets throughout planning area.

Interpretation

- Identify the anticipated visitors (including foreign tourists) and identify their needs and expectations while visiting the planning area.
- The need for interpretation of significant resources and tours should be evaluated in the plan.

Public Safety, Dumps, and Utility Corridors

- Evaluate adequacy of communications.
- Address the impacts and regulation of low flying aircraft.
- The scope of law enforcement, fire management and emergency medical services needs to be addressed.
- Examine the Department of Energy's nuclear waste transportation corridor plans and the Yucca Mountain site.
- Evaluate a closed dump in Death Valley National Park for possible effects on existing and planned activities.
- Describe plans for future utility corridors within the planning area. If new corridors are planned, then compliance, monitoring and reduction of impacts to adjacent habitat need to be evaluated and discussed.
- Evaluate adequacy of public sanitation facilities.
- Address user fees and discrepancy between fees and costs of public safety activities such as search and rescue and Medivac services.

Socioeconomics

- A socioeconomic study should be conducted. It should, at a minimum, examine development activities within and adjacent to the planning area; examine effects of existing and predicted populations, expected economic benefits and costs; and provide an updated visitor profile.
- Evaluate potential concession operations, including jeep tours that could provide access to many people and a concession/permit system permitting access on closed trails.
- Examine possible land exchanges to consolidate federal lands and recommend boundary adjustments.
- Evaluate the transfer of Providence Mountains State Park to Mojave National Preserve.
- Be cognizant of inholders' concerns that the NPS's management policies and potential increases in visitation will effect inholders' property and lifestyles.
- Evaluate visible light pollution affects on the night sky.

- Structure plan so that phases can be implemented under different funding levels.
- Recommend a system for approving, supervising, and coordinating research activities in the planning area.
- Ensure that each agency's management practices remain faithful to their mission statements.
- The needs of foreign tourists should be understood and accommodated in the planning area.

Mining

- Address impacts from operating and abandoned mines in and near the planning area boundaries, reclamation and revegetation plans, and adequacy of existing mitigation measures.
- Describe how mining plans on valid existing mining claims are processed, with examples of previously approved NPS mining permits.

Springs, Water Rights, and Air Quality

- Restoration of numerous springs is needed (e.g. Marl Springs) to make them suitable for wildlife.
- Consider the possible effects of BLM and NPS activities and regional developments (e.g. Stateline and Yucca Mountain) on water quality and quantity and vegetation.
- Address Department of the Interior leadership needed in resolving water issues, including adjudication.
- Address water resource issues (e.g. potential conflict of federal management objectives for Ash Meadows area)
- Address deteriorating air quality within the planning area.

Access

- The plan needs to address the issue of access related to valid existing rights, permitted uses, general recreation and maintenance of facilities such as range improvements, wildlife guzzlers, communications sites, private lands, etc.
- Mojave Road and the Heritage Trail should remain open.
- Clarify and discuss legal and physical requirements for private landowner access to inholdings in the Preserve.
- Consider the deletion, addition, maintenance, paving and overuse of roads throughout the planning area.
- Address possible wilderness boundary modifications to allow vehicle passage through closed sections of the Heritage Trail.
- Address the plans for general aviation and airports in the planning area.
- Consider Amtrak service at Kelso.
- Ivanpah Dry Lake should not be open for vehicles because it is a beautiful area.
- The Death Valley National Park’s west side should have more access roads.

Military

- Address concerns about low level military aircraft overflights and fuel dumping by aircraft.
- Discuss impacts of Fort Irwin's proposed expansion on the planning area.

Wilderness, Camping, Non-motorized Trails, and Recreation

- Examine wilderness boundaries and access for possible adjustments. Address wilderness management guidelines and regulations regarding the maintenance and installation of big game and small game guzzlers in wilderness areas.
- Nonwilderness areas should remain open for multiple use and alternative areas should be provided for recreation opportunities no longer permitted in wilderness areas.
- Establish firewood and campfire policies.
- Look at campground location, numbers and the policies on group, campers with special needs, backcountry and roadside camping.
- Address the management policies and clothing optional policy at the Saline Valley Warm Springs (numerous written comments received supporting existing policy).
- Address the adequacy of trailhead parking (especially for wilderness areas), the number and length of trails, the maintenance of trails, and the need for single or multiple trails for bicycles, hikers and equestrians.
- Address various recreation opportunities including hang-gliding, trail bicycles, and rockhounding.
- Consider establishing carrying capacities and a planning area wide permitting system for heavily used areas.
- Address management issues regarding tour buses in the Preserve.

Biological Resources, Hunting, and Grazing

- Address the NPS policy regarding guzzlers, recognizing the countless hours of volunteer work to install and maintain them, but also the implications of maintaining populations of wildlife artificially.
- Address possible decline of Death Valley’s bighorn sheep and possibility that increased tourism will cause more adverse impacts to sheep and tortoise.
- Examine wild horse and burro management within planning area and each of its subunits and determine appropriate management policies for each area.

Examine the hunting issue including access, visitor safety, elimination of trapping and nongame hunting, and the importance of quail and chukar habitat.

- Address the issue of recreational shooting/plinking in the preserve.
- Evaluate resource issue conflicts between grazing and wildlife habitat.
- Address grazing levels and long-term grazing management.
- Recognize that dolomite formations host many endemic plants.
- Address the recovery objectives for the desert tortoise established in the recovery plan.
- Recognize Death Valley’s two new listed plants and address possible special management needs.

- Consider options for controlling exotic species (tamarisk and others).
- Address impacts of mining on endangered bats.

Cultural Resources and Native Americans

Address Native American participation in the planning process.

- Consider the Mojave, Chemehuevi, and Timbisha Shoshone tribal values.
- Address cultural resources management issues (e.g. trace trails, rock art, military and mining sites) and establish policies for their preservation, protection, interpretation, and appropriateness of revealing their location.
- Examine how parts of the planning area should be managed for their (Native American) spiritual values.
- Address possible hunting/religious conflicts.
- Address whether archeological sites be identified and interpreted for educational value or locations kept secret to protect resources.
- The identification, interpretation and possible restoration of some culturally significant resources (e.g. Tidewater Tonopah Railroad, Death Valley mine structures, military sites, Work Progress Administration guzzler sites, trails, cultural landscapes and Dinosaur Trackway) should be addressed within plan.
- Some cultural elements of the desert should be restored, such as certain features along Historic Route 66.
- Examine the potential use of Kelso Depot as a museum for the preserve.

PLANNING CONSTRAINTS AND MANDATES

Many planning decisions are limited by legal mandates. Endangered species, historical and cultural resources, and clean water and air are some areas in which existing laws can limit planning options. The National Park Service's Organic Act and the 1994 California Desert Protection Act (CDPA), the enabling legislation for Death Valley National Park, define the planning parameters and the mission of the National Park Service and Death Valley National Park in preserving natural resources for the enjoyment of this and future generations. Planning constraints and some of the above laws may appear to conflict. The proposed plan in this document is the planning effort's result in balancing these issues. Below are some specific examples of planning constraints in the CDPA.

- Grazing (sec. 306): The privilege of grazing domestic livestock on lands within the park will continue to be exercised at no more than the current level, subject to applicable laws and NPS regulations.

- Native American Access (sec. 705): The secretary will ensure access by Indian people for traditional cultural and religious purposes.

- Historical and Cultural Values (2)(b)(1)(C): The park will protect and preserve historical and cultural values of the California Desert associated with the ancient

Indian cultures, patterns of western exploration and settlement, and sites exemplifying the mining, ranching and railroad history of the old West.

- Wilderness(sec. 601): Approximately 3,258,038 acres have been designated as wilderness by Congress.

- Access to Private Property (sec. 708): The secretary will provide adequate access to lands or interests in lands not federally-owned, which will provide the owner reasonable use and enjoyment.

- Reserved Water Rights (sec. 706): Congress has reserved a quantity of water sufficient to fulfill the purposes of the CDPA.

- Military Overflights (sec. 802): Nothing in the act shall restrict or preclude low-level overflights of military aircraft over new units of the national park or wilderness preservation systems (or any additions to existing units) including overflights that can be seen or heard within such units.

- Private Lands (sec. 519): Lands not owned by the United States are not subject to regulations that apply only to federal lands. However, application of mineral development regulations (36 CFR Part 9A and 9B) is not affected by this section

ACTIONS CONSIDERED FOR ALTERNATIVES BUT REJECTED

The following are suggestions received during the scoping process that were considered but not evaluated or developed into alternatives:

1. Banning all grazing from NPS units
2. Eliminating, reducing wilderness areas, or allowing motorized vehicles use.
3. Providing for a small, corralled herd of burros within NPS units
4. Permitting rock hounding
5. RS-2477 route determinations

The planning process did not address the first two suggestions, as to do so would violate various laws. This proposed plan intends to implement the 1994 California Desert Protection Act and NPS mission while balancing conflicting mandates as near as possible. Grazing is mandated in the California Desert Protection Act. Wilderness can only be designated, or have its boundaries modified by Congress.

The third and fourth issues would be contrary to the protection of resources and to NPS policy. Regarding burros, it has been written policy of the National Park Service since 1920s that the purpose of NPS units does not include duplicating the legitimate function of other institutions in holding and exhibiting wild or domesticated animals for display. NPS policy is clear on the management of exotic species such as burros, protection of natural resources, and keeping animals confined for display. Keeping a small herd of

burros negatively impact park resources and would be against these policies. Regarding rock hounding, this activity is prohibited by federal regulations (36 CFR, 2.1 [1]).

RS-2477 is section 8 of the Mining Act of 1866. It states "The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted." RS-2477 was repealed when the Federal Land Policy and Management Act (FLPMA) was passed on October 21, 1976. However, Federal Land Policy and Management Act did not terminate any existing "rights-of-way" granted under RS-2477. In 1993, the secretary of the interior issued a moratorium on the consideration of RS-2477 applications by the various agencies of the department. As a result of this moratorium, the National Park Service cannot consider any applications for RS-2477 rights-of-ways.

RELATIONSHIP TO OTHER PLANNING EFFORTS

In preparing this document, the planning team attempted to use the best available information and to coordinate its efforts with other planning efforts in adjacent areas. This planning effort used the following documents as background information:

- the 1980 *California Desert Conservation Area Plan* and its environmental impact statement and supporting documents
- the Death Valley National Monument's 1989 *General Management Plan*, and its 1994 *Natural and Cultural Resource Management Plan*
- the 1994 Bureau of Land Management's *Las Vegas Resource Area Resource Management Plan*
- the 1996 U.S. Forest Service's *Spring Mountains National Recreation Area Plan*
- the BLM's 1997 *Environmental Impact Statement for the proposed land acquisition by Army National Training Center at Fort Irwin*

The planning staff has also worked closely with the other planning efforts including the Bureau of Land Management's West Mojave Plan and Northern and Eastern Colorado Coordinated Planning Effort. Descriptions of these efforts follow:

WEST MOJAVE PLAN

The West Mojave Plan is a multiagency planning effort involving the Bureau of Land Management, the U.S. Fish and Wildlife Service, the California Department of Fish and Game (CDF&G), and local governments. The West Mojave Plan is developing habitat management alternatives that will recommend amendments to the BLM's *California Desert Conservation Area Plan*. It is intended to provide for continued use and development within a 9.4-million-acre area of the western Mojave Desert of southern California in a manner that will ensure the conservation of listed plant and animal species and minimize impacts on critical portions of their supporting habitats. The area extends from Olancha on the north to the San Gabriel and San Bernardino Mountains on the

south, and from Antelope Valley on the west to Twentynine Palms on the east. The West Mojave Plan and NEMO share the same, respectively, eastern and western boundary.

The goals of the West Mojave Plan are to provide recovery of federally listed and state-listed plant and animal species as viable wild populations, to conserve critical elements of supporting habitats, to allow resource use and community expansion, and to simplify and reduce the regulatory burden of permitting processes for projects on public and private lands.

Two species that are especially targeted for management protection by this plan are the desert tortoise (*Gopherus agassizii*) and the Mohave ground squirrel (*Spermophilus mohavensis*).

The West Mojave plan report is still in the draft preparation stage, and details of the proposed or preferred amendments to the CDCA Plan are not yet available.

NORTHERN AND EASTERN COLORADO DESERT COORDINATED MANAGEMENT PLAN

This planning area is a 5.5 million-acre area south of the NEMO planning area. The following description of this planning effort is from the *Northern and Eastern Colorado Desert Coordinated Management Plan: Preparation Guide* prepared by the Bureau of Land Management in 1994.

> The primary purpose of this plan is to provide for the recovery of the threatened Desert Tortoise which was listed as a threatened species by the U.S. Fish and Wildlife Service in 1990...The plan will implement the requirements of the U.S. Fish and Wildlife Service's Recovery Plan. The purpose is also to address management of the diversity of all plants and wildlife in ecosystem principles. This focus will address all plants and animals in a systems context (habitats) and selected species (i.e., about 30 flagship and special status species) in particular. Land users and managers will benefit through resolution of land use conflicts in a regional context and more efficient and consistent project review and processing.
>
> The plan will set standards for managing desert tortoise, other special status species, and habitats within the planning area by defining zones and management prescriptions within and by which they will be managed indefinitely for their individual and interdependent qualities. Zones will also be identified for which Biodiversity values will not receive priority emphasis over other resource management programs. Routes of travel across public lands will be designated as open, closed or limited.
>
> The final plan will function as a habitat management plan and will also amend the 1980 *California Desert Conservation Area Plan*.

LAS VEGAS RESOURCE MANAGEMENT PLAN

The *Proposed Las Vegas Resource Area Draft Resource Management Plan/Final Environmental Impact Statement* was released in May 1998. The plan will provide management guidance for about 3.7 million acres of public land administered by the Bureau of Land Management in the Las Vegas Field Office. The plan focuses on six management issues: land tenure, desert tortoise, mineral development, off-road vehicle use, special management area, areas of critical environmental concern (ACECs), and utility corridors.

SPRING MOUNTAINS NATIONAL RECREATION AREA PLAN

In 1996 the final management plan was prepared for Spring Mountains National Recreation Area (SMNRA). This plan, which amended the *Toiyabe National Forest Land and Resource Management Plan,* resulted in the following actions:

- unified management direction for the SMNRA under a single plan
- identified lands suitable for recreation development, mining, and other uses
- recommended changes in special area designations (wilderness, research natural areas, and scenic byways)
- established a SMNRA monitoring and evaluation program
- developed new management prescriptions and established two new management areas

FORT IRWIN PROPOSED LAND ACQUISITION

The proposed action is for more than 330,000 acres of lands north and west of the training center to be acquired for the National Training Center, Fort Irwin, California. These lands would be for the exclusive military use for force-on-force training of armored and mechanized brigades. Other alternatives call for variations of the proposed action and for the acquisition of lands to the east and south of Fort Irwin. The area needed for these alternatives range from about 180,000 acres to over 260,000 acres. Fort Irwin is adjacent to the NEMO planning area. Significant impacts on public access, visual aesthetics, air quality, soils, vegetation, wildlife, cultural resources, land use, wilderness quality, and transportation were analyzed in the environmental impact statement prepared by the Bureau of Land Management.

YUCCA MOUNTAIN NUCLEAR WASTE DISPOSAL AT NEVADA TEST SITE

Spent nuclear fuel and high-level radioactive waste will be transported via surface public highways to this site, 100 miles northwest of Las Vegas, and deposited in sealed vaults. Concern has been expressed about accidental spills while the materials are in transit and about leaks from the sealed vaults entering and contaminating the groundwater.

FUTURE PLANNING EFFORTS

As a result of efforts made to date, additional NPS planning documents have been identified as being needed to supply detailed information for specific topics. Additional planning efforts that may be undertaken over the next ten years include the following:

- Comprehensive Interpretive Plan
- Backcountry/Wilderness Management Plan
- Fire Management Plan
- Road Management Plan
- Grazing Management Plan
- Site Management Plan for Saline Valley
- Development Concept Plan for Furnace Creek/Cow Creek
- Development Concept Plan for Grapevine
- Historic Resources Study/Development Concept Plan for Scotty's Castle
- Sign Plan
- Wayside Exhibit Plan
- Conservation Plan for Eureka Dunes
- Minerals Management Plan